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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,390	10/29/2001	James T. Dumas	10541/587	1986
29074	7590	03/18/2004	EXAMINER	
VISTEON 29074 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60611			SINES, BRIAN J	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/039,390	Applicant(s) DUMAS ET AL.	
	Examiner Brian J. Sines	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/23/2003.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 24-26 is/are allowed.
 6) ☒ Claim(s) 1,3-23 and 27-30 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

The restriction election requirement has been withdrawn. Claims 1 and 3 – 30 have been rejoined for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27 – 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 27 is dependent upon claim 31, which does not appear to be present in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

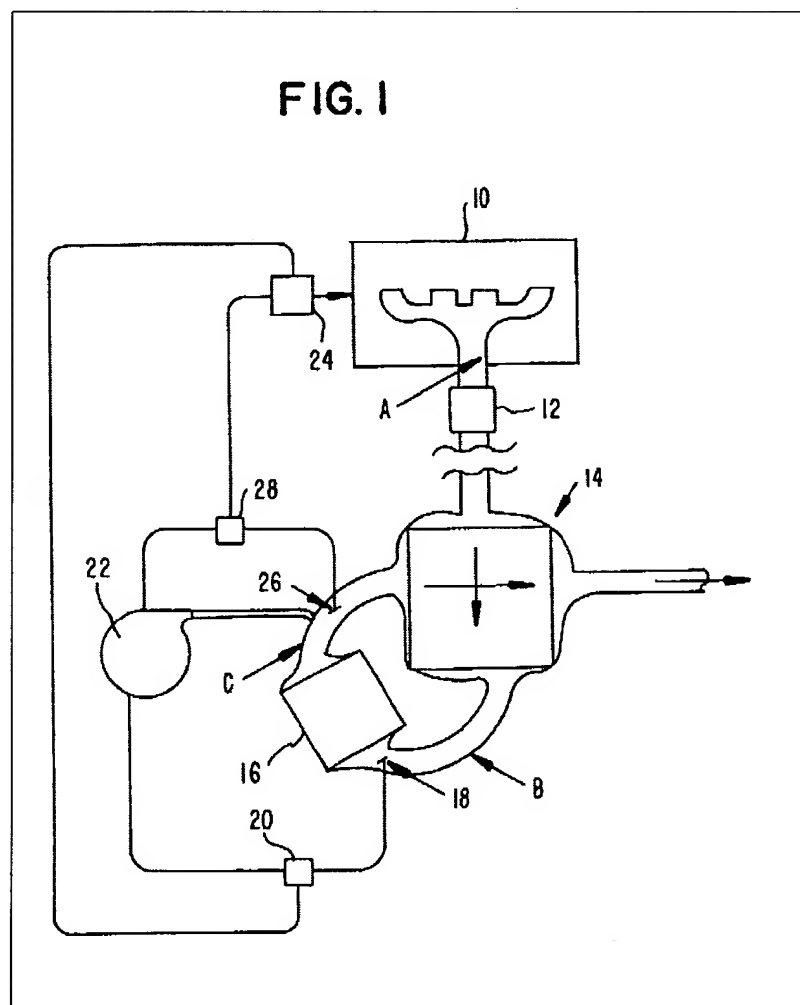
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 9 – 12, 14, 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochmuth (U.S. Pat. No. 6,00,217 A). Regarding claims 1 and 17, Hochmuth teaches an apparatus comprising: an element (hydrocarbon trap 16) capable of releasably or reversibly absorbing hydrocarbons, wherein the element comprises a plurality of chambers; and a detecting means (26) operatively connected to the element for detecting the level of hydrocarbons absorbed by the element. The hydrocarbon trap (16) comprises an activated

Art Unit: 1743

carbon adsorbent inherently containing pores or chambers. The adsorbent material may be deposited onto a solid monolithic ceramic carrier by methods known in the art (see col. 5, lines 66 – col. 7, line 34; figure 1). Regarding claim 3, Hochmuth teaches that the detecting means is connected to a diagnostic system (see col. 7, lines 61 – 67). It is inherently anticipated that wires or leads would be utilized to provide a connection to the diagnostic system. Regarding claims 12, 15 and 18, the adsorbent or binding material may include materials comprising activated carbon (see col. 6, lines 4 – 29). Regarding claim 14, Hochmuth teach the use of a ceramic honey comb structure (see col. 9, lines 16 – 39).



Regarding claims 1 and 9 – 11, these claims recite various functional limitations, such as the element being capable of releasably absorbing hydrocarbons. In a claim drawn to an apparatus statutory class of invention, a functional limitation may not be divorced from any specifically recited structure or composition. A functional limitation is an attempt to define an apparatus by what it does, rather than by what it is, *as evidenced by its specific structure* (emphasis added). A functional limitation is often used in association with an element to define a particular capability or purpose that is served by the recited element (see MPEP § 2173.05(g)). The applicant states that the element (10) is preferably constructed from a material that can absorb hydrocarbons. The applicant further discloses that the absorbing element (10) could be constructed entirely of carbon or could be constructed from carbon mixed with a binder material, such as gray clay or a ceramic (see p. 3, lines 16 – 26 of applicant's specification). Regarding product and apparatus claims, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (see MPEP § 2112.01). The Courts have held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. See *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V. Bausch and Lomb, Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if

Art Unit: 1743

the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

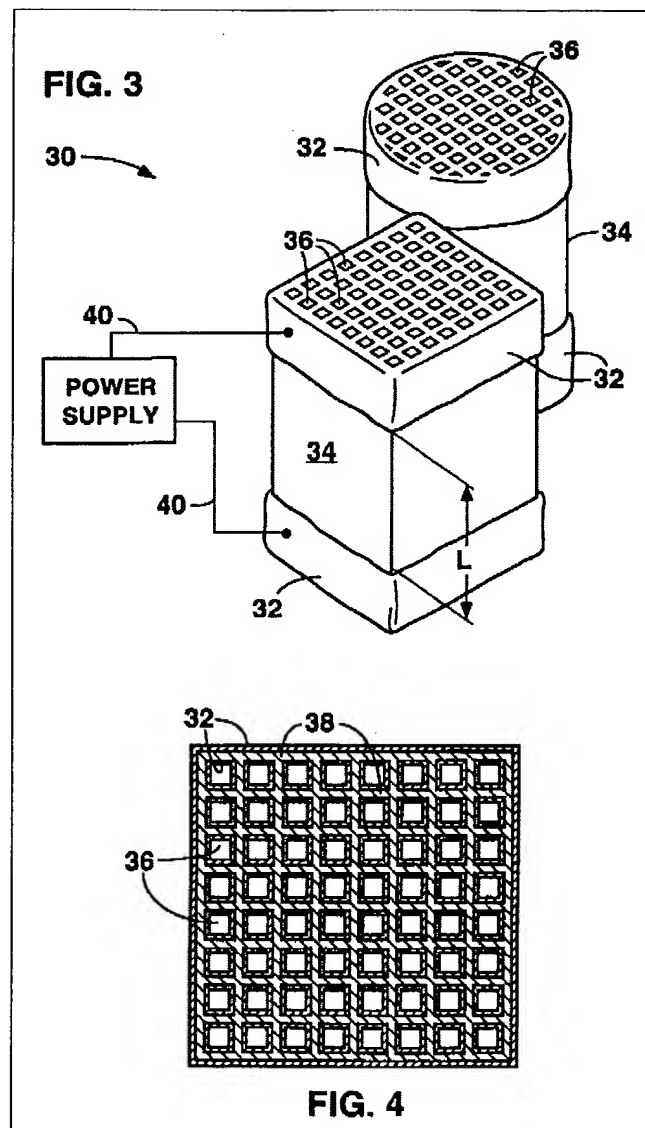
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4 – 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochmuth in view of Gadkaree *et al.* (U.S. Pat. No. 6,097,011 A). Regarding claim 4, Hochmuth does not specifically teach the use of conductive epoxy adhesives for facilitating the attachment of wires to the element structure. However, Gadkaree *et al.* do teach the use of electrically-conductive adhesives, such as silver-containing epoxies (see col. 7, lines 11 – 16). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a conductive epoxy in facilitating wire attachment for the apparatus, since the Courts have held that the selection of a known material, which is based upon the suitability of the material for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125

Art Unit: 1743

USPQ 416 (CCPA 1960). Regarding claim 5, Gadkaree *et al.* teach that conventional forming techniques, such as molding, may be utilized in fabricating their disclosed apparatus (see col. 8, lines 42 – 57). Consequently, a person of ordinary skill in the art would have had a reasonable expectation of success in utilizing a molding technique in fabricating the apparatus of Hochmuth with molded wire lead connections. The Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the teachings of Gadkaree *et al.* in providing for wires that are molded with the apparatus of Hochmuth.



Regarding claim 6, Gadkaree *et al.* teach the use of a ceramic, clay or activated-carbon containing honeycomb structure (see col. 3, line 36 – col. 8, line 67). Gadkaree *et al.* teach that their disclosed apparatus may be used in conventional automotive applications (see col. 8, lines 58 – 67). Therefore, it would have been obvious to a person of ordinary skill in the art to utilize the honeycomb structure disclosed by Gadkaree *et al.* with the apparatus of Hochmuth, which provides for effective airflow and optimal operating characteristics. Regarding claim 7,

Art Unit: 1743

Gadkaree *et al.* teach the use of cylindrical or circular honeycombs (see col. 7, lines 60 – 66).

Regarding claim 8, Gadkaree *et al.* teach the use of rectangular-faced or square honeycombs (see col. 7, lines 60 – 66). Regarding claim 13, Gadkaree *et al.* teach the use of clay (see col. 3, lines 61 – 66). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a clay or gray clay with the apparatus of Hochmuth, since the Courts have held that the selection of a known material, which is based upon the suitability of the material for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Claims 16 and 19 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochmuth in view of Visser *et al.* (U.S. Pat. No. 5,265,417 A). Hochmuth does not specifically teach the incorporation of a wheatstone bridge circuit. Visser *et al.* teach the incorporation of a wheatstone bridge circuit in a automotive engine applications (see col. 5, lines 7 – 46). Accordingly, a person of ordinary skill in the art would have had a reasonable expectation of success in incorporating a wheatstone bridge circuit, as is generally well known in the art and as taught by Visser *et al.*, with the sensing apparatus, as taught by Hochmuth. The Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate a wheatstone bridge circuit with the apparatus of Hochmuth in order to facilitate effective sensing operation. Regarding claims 20 and 21, Visser *et al.* do teach the use of a computer (see col. 3, lines 66 – 67).

Regarding claims 22 and 23, these claims contain functional recitations. The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V. Bausch and Lomb, Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).

Allowable Subject Matter

Claims 24 – 26 are allowed.

Claims 27 – 30 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art neither teach or fairly suggest a method for releasably or reversibly absorbing hydrocarbons in an engine air intake system of an engine, wherein the method comprises the step of operatively connecting the sensing element to a detecting means for detecting the level of hydrocarbons within the element itself.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hervert teaches a monolithic honeycomb form. Taniguchi *et al.* teach a hydrocarbon sensor. Adamczyk, Jr. *et al.* teach an apparatus and method for monitoring hydrocarbon concentration in exhaust gas. Maus *et al.* teach a method and apparatus for monitoring the function of a catalytic converter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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